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10/829,499

04/22/2004

Cornell J. Kinderknecht

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EXAMINER

VU, TUAN A

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/829,499	<b>Applicant(s)</b> KINDERKNECHT ET AL.	
	<b>Examiner</b> Tuan A. Vu	<b>Art Unit</b> 2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/22/04</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This action is responsive to the Applicant's submission filed 4/22/04.

As indicated in Applicant's response, claims 1-33 pending in the office action.

#### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The Federal Circuit has recently applied the practical application test in determining whether the claimed subject matter is statutory under 35 U.S.C. § 101. The practical application test requires that a "useful, concrete, and tangible result" be accomplished. An "abstract idea" when practically applied is eligible for a patent. As a consequence, an invention, which is eligible for patenting under 35 U.S.C. § 101, is in the "useful arts" when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The test for practical application is thus to determine whether the claimed invention produces a "useful, concrete and tangible result".

The current focus of the Patent Office in regard to statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial exception (software) is that the claimed invention recite a practical application. Practical application can be provided by a physical transformation or a useful, concrete and tangible result. The following link on the World Wide Web is the United States Patent And Trademark Office (USPTO) reference in terms of guidelines on a proper analysis on 35 U.S.C. §101 rejection.

[http://www.uspto.gov/web/offices/pac/dapp/opla/precognotice/guidelines101\\_20051026.pdf](http://www.uspto.gov/web/offices/pac/dapp/opla/precognotice/guidelines101_20051026.pdf)

Specifically, claim 1 recites a system comprising a *injector*, a *redirect code* and *library of functions*. As disclosed, the injector is a lightweight piece of pushed down code (Specifications pg. 5, top). In whole, the elements recited are software, and the claim amounts to mere listing of software elements as in a 'Functional Descriptive Material' type of deficiency (see USC101

Guidelines pdf file, Annex IV, pg. 52-54). The claimed subject matter cannot be categorized as any of the categories of statutory subject matter; nor can the claim, in the absence of hardware support, be deemed capable of realizing the listed software material into real-world application data. The claim is rejected for non-statutory subject matter for all of the above reasons.

Claims 2-9 for not providing hardware support to remedy to the above deficiency, are also rejected for not fulfilling the statutory practical Application requirement as identified in part by the USC § 101 Guidelines, as set forth above.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-6, 10-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Calder et al, USPubN: 2002/0092003(hereinafter Calder).

**As per claim 1**, Calder discloses a system for controlling an application process comprising:

an injector (step 810, Fig. 8); redirect code (step 540 Fig. 5) operable to be placed in a memory of the application process; and

a library of redirect functions operable to be referenced by the redirect code (step 920 - Fig. 9; para 0096, pg. 5) during the application process execution,

the redirect code operable to intercept a set of target function calls made by the application process (intercept 940 - Fig. 9; para 103, pg. 6) and execute the redirect functions

for the intercepted target function calls (step 990 - Fig. 9).

**As per claims 2-4**, Calder discloses wherein the injector is pushed (interception module - para 0096, pg. 5) to a device executing the application process; wherein the set of target function calls comprises socket function calls (e.g. Fig. 27); wherein the library of redirect functions comprises a dynamic link library (e.g. step 540-Fig.5; Fig. 9).

**As per claim 5**, Calder discloses: a secure environment having a plurality of resources (e.g. *resource request 1335* - Fig. 13); a firewall securing all access to the plurality of resources in the secure environment (e.g. Fig. 22-24, 26; para 0076 - pg. 4; Fig. 39-40); and an access policy pushed to a device executing the application process, the access policy identifying the resources authorized for access by the device (*access* - para 0074, pg. 3-4; Fig. 39-40 - Note: Lan and internal network based on access checking and encryption of data reads on policy to deny unauthorized intrusion).

**As per claim 6**, Calder discloses wherein the application process comprises an application operable to communicate with the secure environment resources using an Internet transport protocol, the redirect code, and the redirect functions (e.g. Fig. 1-4; Fig. 9; para 103, pg. 6).

**As per claim 10**, Calder discloses a method for controlling an application process comprising:

pushing an injector to a device executing the application process (Fig. 8);

injecting a redirect code into the application process (step 540 Fig. 5);

executing the redirect code in the application process to reference a redirect library (step 920 - Fig. 9; para 0096, pg. 5) of redirect functions;

resuming the execution of the application process (e.g. return - Fig. 36 - Note: interception with handling via DLL entails a return back to the application after the handler code has completed); and

intercepting at least one target function calls made by the application process and executing at least one redirect function (step 990 - Fig. 9) in place of the at least one target function calls.

**As per claim 11**, Calder discloses: starting the application process; interrupting the execution of the application process; and injecting the redirect code into a memory space of the application process (Fig. 10-11).

**As per claim 12**, Calder discloses wherein injecting a redirect code further comprises: starting the application process using a debug option; catching an exception thrown by the application process; locating memory space in the application process; injecting the redirect code into the memory space of the application process; and set an instruction pointer to the redirect code (e.g. step 1030 - Fig. 10; Fig. 15, 33, 41).

**As per claim 13**, Calder discloses wherein injecting a redirect code further comprises: starting the application process using a suspend option; creating memory space in the application process; injecting the redirect code into the memory space of the application process; and set an instruction pointer to the redirect code (e.g. Fig. 7, 10-11).

**As per claim 14**, Calder discloses wherein injecting a redirect code further comprises: starting the application process using a suspend option; creating memory space in the application process; injecting the redirect code into the memory space of the application process; (Fig. 7, 10-11); and use a create remote thread function to execute the redirect code

(e.g. Fig. 13; Fig. 15).

**As per claim 15**, Calder discloses wherein executing the redirect code comprises: loading the redirect library of redirect functions; determining a location of an import table replacement (Fig. 7,10 - Note: import table, export table reads on table of routines to insert to memory for replacement) function in the redirect library; and executing the import table replacement function.

**As per claim 16**, Calder discloses table including a dynamic link library (Fig. 10-11).

**As per claim 17**, Calder discloses wherein executing the import table replacement function comprises: searching an import table of the application process for the set of target function calls; and modifying the target function calls to reference redirect functions in the redirect library (Fig. 10-11).

**As per claim 18** Calder discloses wherein executing the import table replacement function comprises: searching dynamic link libraries of the application process for the set of target function calls; and modifying the target function calls to reference redirect functions in the redirect library (e.g. para 0102, pg. 6).

**As per claims 19-21**, Calder discloses receiving user information; authenticating the user information; pushing an access policy specifying resources accessible by a user associated with the user information to a device used by the user; executing redirect functions to enable a secured access to a plurality of resources via a firewall ( refer to claim 5)

**As per claim 20**, refer to claim 3

**As per claim 22**, Calder discloses method comprising:

receiving user information; authenticating the user information (Fig. 18-19; re claim 5);

pushing an injector to a device executing an application process (Fig. 8); and  
intercepting at least one target function call made by the application process to at least one of a plurality of secure resources and executing at least one redirect function in place of the at least one target function call (step 540 Fig. 5; step 920 - Fig. 9; para 0096, pg. 5).

**As per claim 23**, Calder discloses: injecting a redirect code into the application process; executing the redirect code in the application process to reference a redirect library of redirect functions; and resuming the execution of the application process ( see claim 10).

**As per claims 24-27**, refer to claim 11-14, respectively.

**As per claims 28-31**, refer to claim 15-18, respectively

**As per claims 32-33**, refer to claim 20-21, respectively

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calder et al, USPubN: 2002/0092003, and further in view of Thomas et al., USPN: 6,148,336 (hereinafter Thomas).

**As per claim 7**, Calder does not explicitly disclose wherein the application process comprises an email application. But GUI-based applications for which resources request are being fulfilled to support user's applications is disclosed ( see Fig. 33-34; Fig. 47) in Calder's network of Lan users. Users applications having interception of messages with insertion of



special code to redirect to a proper validating or readdressing of message request is disclosed in Thomas's Web-based paradigm (e.g. Fig. 6; *library ... containing a plug-in* - col. 9, lines 6-40) wherein socket communications are inserted with a plug-in supported via a DLL container for redirection with proper binding and re-wrapping ( see Fig. 9-10). Based on Thomas' approach to introduce a novel way for addressing IP address filtering drawback wherein Email is one such application involving such filtering concern ( see col. 2), it would have been obvious for one skill in the art to implement the application examination by Calder ( see Fig. 33-34; *decrypt* - Fig. 39) so that the interception of LAN network messages via IP/TCP protocol via some dynamic application extension (such as plug-in as by Thomas -- see SUMMARY of Invention - col. 4-5) would be able examine the likes of Email message content and resolve potential incompatibility issues by this extension service such as examining, blocking, modifying, decrypting and re-encrypting prior to providing a wrap-up binding process ( see Thomas, col. 5) which also endeavored as set forth above by Calder.

**As per claims 8-9**, Calder does not disclose wherein the application process comprises a web browser application wherein the application process comprises a file transfer application. But applications with Winsock (see Thomas ( see Fig. 1-6) or Windows system having provision of DLLs ( see Calder para 0081-0082) was known environments in which standard file transfer and browser applications would have founded to provide communications between users and services. The limitation that applications be Email, or FTP or browser messages in light of the interception and redirection as taught by both Calder and Thomas would have been obvious for the same rationale as set forth above, because application like those require message transfer using a proper protocol, and the interception as purported by

Calder or Thomas would support examination of such message internals to provide a modified and adjusted redirection as mentioned above in the respective endeavor by Calder and Thomas.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (571) 272-3735. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on (571)272-3759.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3735 ( for non-official correspondence - please consult Examiner before using) or 571-273-8300 ( for official correspondence) or redirected to customer service at 571-272-3609.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tuan A Vu/

Primary Examiner, Art Unit 2193

April 21, 2008